EXHIBIT F

Biographical Sketch

Chikaodinaka Okechi-Dike Nwankpa
Professor and Director
Center for Electric Power Engineering
Department of Electrical and Computer Engineering
Drexel University, Philadelphia, PA 19104

Education

Aug. 1990	Ph.D. in Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, Illinois.
Dec. 1986	Magistr Engineering Sciences in Electrical Engineering, Leningrad Polytechnic Institute, Leningrad, U.S.S.R.

Experience

Sept. 2002 to Present	Professor, Department of Electrical and Computer Engineering, Drexel University, Philadelphia, Pennsylvania.
Oct. 1995 to Aug. 2002	Associate Professor, Department of Electrical and Computer Engineering, Drexel University, Philadelphia, Pennsylvania.
Oct. 1990 to Sept. 1995	Assistant Professor, Department of Electrical and Computer Engineering, Drexel University, Philadelphia, Pennsylvania.
Sept. 1987 to Aug. 1990	Research Assistant, Department of Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, Illinois.

Awards and Scholarships

1994 Presidential Faculty Fellow Award (Presented by William Jefferson Clinton)
1991 National Science Foundation (NSF) Research Initiation Award.

Affiliation

Institute of Electrical and Electronics Engineers.

Highlighted Grants (Over $6 million)

Selected Grants Awarded

Title: PowerGrid: A Computation Engine for Large-Scale Electric Networks
Co-PI(s): P. Nagvajara, J. Johnson, K. Miu, D. Niebur
Source: Department of Energy (DOE) Type: Research and Equipment

Title: Voltage Stability Assessment of the PP&L Power System Network
Co-PI(s): R. Fischl
Source: Pennsylvania Power & Light Company Type: Research

Title: An On-Line Dynamic Security Index for Power System Contingency Selection
Source: National Science Foundation (NSF) Type: Research and Equipment

Title: Stochastic Models for Power Electronic Systems
Source: Drexel University Research Scholar Type: Research

Title: Development of Optically Controlled Distribution System
Co-PI(s): R. Fischl
Source: Electric Power Research Institute (EPRI) Type: Research

Title: Computer Tools for Power System Voltage Stability Analysis
Co-PI(s): H. Kwatny
Source: Pennsylvania Electric Energy Research Council (PEERC)
Type: Research

Title: Presidential Faculty Fellow Award
Source: White House/NSF Type: Research and Equipment

Title: Interconnected Power System Laboratory
Co-PI(s): R. Fischl, M. Kaplan and E. Stagliagno
Source: NSF Type: Equipment

Title: Structural Renovations and System-Connecting Equipment for the Center for Electric Power Engineering
Sources: Philadelphia Electric Company (PECO), GPU and Alumni
Type: Structural Changes and Equipment

Title: Power System Monitoring and Control for Autonomous Naval Shipboard Electric Power Distribution Systems
Sources: Office of Naval Research (ONR)
Type: Structural Changes and Equipment

Teaching

A. Courses Taught

Undergraduate:

Electric Circuits and Systems I

Electric Circuits and Systems III

Energy Conversion Machinery

Power Electronics I, II & III

Energy Management Systems

Motor Control Principles

Graduate:

Power Systems Analysis
Computer Analysis of Power Systems
Synchronous Machine Modeling
High Voltage Power Phenomena
Advanced Power Electronics I, II & III
Transients in Electric Power Systems
Load Forecasting and Probability Methods
Power System Planning
Power System Reliability

Course Development

ECE-P-451 Power Electronics - Involving new curriculum and hardware/software lab development.

ECE-P354 Energy Management Systems - Involving new curriculum and hardware/software lab development.

ECE-P352 Motor Control Principles - Involving new curriculum and hardware/software lab development.

Students Support/Supervision (Partial List)

Name	Degree & Dept/Inst	Grad. Date	Fraction RA
1. Chris Dafis	Ph.D. ECE	Graduated – 6/05	0%
2. Anawach Sangswang	Ph.D. ECE	Graduated – 6/03	100%
1. Saffet Ayasun	Ph.D. ECE	Graduated – 6/02	100%
2. Steve Carullo	Ph.D. ECE	Graduated – 6/03	100%
3. Yiqiao Liang	Ph.D. ECE	Graduated – 6/02	100%
4. Hadiza Mohammed	M.Sc. ECE	Graduated – 6/01	100%
7. John Schwartzenberg	M.Sc. ECE	Graduated – 6/94	100%
8. Yin-Chun Tse	M.Sc./B.Sc. ECE	Graduated – 6/99	100%
9. Steve Carullo	M.Sc., ECE	Graduated – 697	100%
10. Scott Casper	MSc. ECE	Graduated – 6/94	

11. Michael Ginzburg	MSc. ECE	Graduated – 6/94
12. Mark Gravener	M.Sc. ECE	Graduated – 6/97
13. Raquibul Hassan	M.Sc. ECE	Graduated - 6/94
14. Lifeng Shi	M.Sc. ECE	Graduated – 6/97
15. Dana Sochuliakova	M.Sc. ECE	Graduated – 6/98
16. Chor Hon Wang	M.S./B.S.	Graduated – 9/97
17. Lingyang Xu	M.Sc ECE	Graduated - 6/94

Professional Society Service

1. 1993-1994 IEEE Power Society - Vice-Chairman of Local Chapter
2. 1994-1996 IEEE Power Society - Chairman of Local Chapter
3. 1994-1999 Member of IEEE Power Society Task Force on Load Modeling.

Recent Outreach Activities

Interviews given on cause and effect of the 8/14 East-Coast Blackout to Associated Press, Philadelphia Inquirer, NPR and local radio stations. (AP article was distributed by a large number of international and national newspapers including the UK Guardian.)

Publications

S. Ayasun, C. O. Nwankpa, and Harry G. Kwatny, "An Efficient Method To Compute Singularity-Induced Bifurcations of Decoupled Parameter-Dependent Differential-Algebraic Power System Model," *Applied Mathematics and Computation*, Vol. 167, No. 1, pp. 435-453, 2005.

S. Ayasun and C. O. Nwankpa, "Induction Motor Tests Using Matlab/Simulink and their Integration into Undergraduate Electric Machinery Courses," *IEEE Transactions on Education*, Vol. 48, No. 1, February 2005, pp. 37-46.

Yang, X.; Carullo, S.P.; Miu, K.; Nwankpa, C.O.; "Reconfigurable Distribution Automation and Control Laboratory: Multiphase, Radial Power Flow Experiment" *Power Systems, IEEE Transactions on* Volume 20, Issue 3, Aug. 2005 Page(s):1207 - 1214

Carullo, S.P.; Nwankpa, C.O.; "Experimental validation of a model for an information-embedded power system" *Power Delivery, IEEE Transactions on* Volume 20, Issue 3, July 2005 Page(s):1853 - 1863

Ayasun, S.; Nwankpa, C.O.; Kwatny, H.G.; "Computation of singular and singularity induced bifurcation points of differential-algebraic power system model" *IEEE Transactions on Circuits and Systems I: Regular Papers*,Volume: 51 , Issue: 8 , Aug. 2004 Pages:1525 - 1538

A. Sangswang and C. O. Nwankpa, "Effects of switching-time uncertainties on pulsewidth modulated power converters: modeling and analysis" Circuits and Systems I: Fundamental

Theory and Applications, IEEE Transactions on ,Volume: 50 Issue: 8 , Aug. 2003 Page(s): 1006 -1012

R. Stoicescu, K. Miu, C. O. Nwankpa, D. Niebur, X. Yang, "IEEE 3-Phase Converter Models for Power Flow Studies of Small Integrated *AC/DC* Power System", *IEEE Transactions on Power Systems*, Vol. 17, No. 4, Nov. 2002, pp. 1016-1021

S. P. Carullo and C.O. Nwankpa, "Interconnected Power Systems Laboratory: A Computer Automated Instructional Facility for Power System Experiments", *IEEE Transactions on Power Systems*, Vol. 17, No. 2, May 2002, pp. 215-222.

Y. Liang and C. O. Nwankpa, "A Power-Line Conditioner Based on Flying-Capacitor Multilevel Voltage-Source Converter with Phase-Shift SPWM", IEEE Transactions on Industry Applications Volume 36 Number 4, July/August 2000, pp. 965-971.

H. Mohammed and C. Nwankpa, "Stochastic Analysis and Simulation of Grid-Connected Wind Energy Conversion System", *IEEE Trans. On Energy Conversion* Vol 15, No. 1, March 2000, pp. 85-90.

Y. Liang and C. O. Nwankpa, "A New Type of STATCOM Based on Cascading Voltage Source Inverters with Phase-Shifted Unipolar SPWM", IEEE Transactions on Industry Application Volume 35 Number 5, September/October 1999, pp. 1118-1123.

Sochuliakova, D., Niebur, D., Nwankpa, C.O., Fischl, R. and Richardson, D., "Identification of Capacitor Position in a Radial System," IEEE Transactions on Power Delivery, IEEE Transaction on Power Delivery, Vol. 14, No. 4, October 1999, 1368-1373.

M. Gravener and C. Nwankpa, "Available Transfer Capability and First Order Sensitivity", *IEEE Trans. on Power Systems*, Vol. 13, No. 2, May 1999, pp. 512-518.

Y. Liang, C. Nwankpa and R. Fischl, A. DeVito and C. Readinger, "Dynamic Reactive Load Model", *IEEE Trans. on Power Systems*, Nov. 1998, Vol. 13, pp. 1365-1372.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl, A. Rosen, D. B. Gilbert and D. Richardson, "A Novel Laser Activated PIN Diode Switch for Power Applications", *IEEE Transactions on Electron Devices*, July 1996, Vol. 43, No. 7, pp. 1061-1066..

S. P. Carullo, R. Bolkus, J. Hartle, J. Foy, C. O. Nwankpa, R. Fischl and J. Gillerman, "Interconnected Power System Laboratory: Fault Analysis Experiment", *IEEE Transactions on Power Systems* Vol. 11, No. 4, pp. 1913-1919, Nov. 1996.

S. G. Casper and C. O. Nwankpa, "Bibiliography of Load Models for Power System Dynamic Performance" *IEEE Transactions on Power Systems*, Vol. No. 1, Feb., 1995, pp. 523-538.

H. G. Kwatny, R. Fischl and C. Nwankpa, "Local Bifurcations in Power Systems: Theory, Computation and Application," *Proceedings of the IEEE*, Nov. 1995.

S. G. Casper and C. O. Nwankpa, "Bibiliography of Load Models for Power System Dynamic Performance" *IEEE Transactions on Power Systems*, Vol. No. 1, Feb., 1995, pp. 523-538.

S. Wunderlich, M. M. Adibi, R. Fischl and C. O. Nwankpa, "An Approach to standing phase angle reduction," *IEEE Transactions on Power Systems* Vol. 9, No. 1 pp. 470-478 February 1994.

C. O. Nwankpa and R.M. Hassan, "A Stochastic Based Voltage Collapse Indicator" *IEEE Transactions on Power Systems*, Vol. 8 No. 3, pp. 1187-1194, August 1993.

C. O. Nwankpa and S. M. Shahidehpour, "A Generalized approach to the mean first passage time of a dynamic power system," *International Journal of Systems Science* Nov. 1993.

C. O. Nwankpa, S. M. Shahidehpour and Z. Schuss, "A stochastic approach to small disturbance stability analysis," *IEEE Transactions on Power Systems*, Vol. 7 No. 4, pp. 1519-1528, Nov. 1992.

C. O. Nwankpa and S. M. Shahidehpour, "A stochastic model for power system planning studies," *IEE Proceedings Part C*, Vol. 138, No. 4, pp. 307- 320, 1991.

C. O. Nwankpa and S. M. Shahidehpour, "Decisions for the prevention of a voltage collapse in electric power systems," *Journal of Information and Decision Technologies*, Vol 18, pp 1-31, 1992.

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C. O. Nwankpa, S. M. Shahidehpour and Z. Schuss, "Analysis of small disturbances of transmission lines in dynamic stability studies," *International Journal of Systems Science*, Vol. 22, No. 5, pp. 845--872, 1991.

C. O. Nwankpa and S. M. Shahidehpour, "Colored noise modeling in the reliability evaluation of electric power systems," *Journal of Applied Mathematical Modelling*, Vol. 14, No. 7, pp. 338--351, July 1990.

C. O. Nwankpa, S. M. Shahidehpour and J. Qiu, "A class of load perturbations in reliability evaluation of electric power systems," *Journal of Electric Machines and Power Systems*, Vol. 17, No. 4, pp. 233--257, 1989.

Conference Proceedings:

K. Miu, C. Nwankpa, X. Yang and A. Madonna, "Hardware Layout of a Reconfigurable Distribution Automation and Control Laboratory," Proceedings of the ASEE Annual Meeting, Montreal, CAN, June 18, 2002.

A. Sangswang and C.O. Nwankpa, "A Computational Tool to Identify Regions of Operation for DC-DC Boosts Converters," 8th IEEE Workshop on Computers in Power Electronics, vol. 1, June 2002.

A. Sangswang and C.O. Nwankpa, "Parameter space depiction of operation for DC-DC boost converter," Proceedings of the 2002 American Control Conference, vol. 6, pp. 4874-4878.

A. Sangswang and C.O. Nwankpa, "Performance Indices for a Stochastic Model of a Power Electronic Converter," Proceedings of 27th Annual Conference of the IEEE Industrial Electronics Society, Denver, Colorado, November 2001.

C. Dafis, C. O. Nwankpa, "A Nonlinear Observability Formulation for Power Systems Incorporating Generator Dynamics", *IEEE International Symposium on Circuits and Systems Proceedings*, Arizona, Nevada, 2002.

C. Dafis, C. O. Nwankpa "Addressing Nonlinear Observability Issues in Power Systems", *Power System Computation Conference Proceedings*, Sevilla, Spain 2002.

C. Dafis, C. O. Nwankpa, A. Petropulu, "Harmonic Decomposition of Transient Disturbances Using the ESPRIT and LS Prony Methods", *Power System Computation Conference Proceedings*, Sevilla, Spain 2002.

S. Carullo and C.O. Nwankpa, "Experimental Platform for the Modeling of an Information Embedded Power System", 14th Power System Computation Conference, June 2002, Sevilla, Spain.

S. Carullo and C.O. Nwankpa, "Analysis of Measurement Delay Errors in an Ethernet Based Communication Infrastructure for Power Systems", Proceedings of IEEE International Symposium on Circuits and Systems, May 2002, Scottsdale, Arizona.

A. Sangswang and C.O. Nwankpa, "A Stochastic Inverter Model due to Switching Time Uncertainties," Proceedings of 9th European Conference on Power Electronics and Applications (EPE2001), Graz, Austria August 2001.

A. Sangswang, G. Rost and C. O. Nwankpa, "Digital Signal Processing-Based Rapid Prototyping DC-AC Converter," Proceedings of 32nd North American Power Symposium (NAPS), University of Waterloo, Waterloo, Ontario, Canada, pp. 10/28 –10/34, October 2000.

A. Sangswang, G. Rost, C. O. Nwankpa and A. Nwankpa, "A Modular Simulink-Based Controlled Three-Phase Switch Mode Inverter," Proceedings of IEEE PES 2000 Summer Meeting, Seattle, Washington, July 2000.C. Dafis, C. O. Nwankpa, "A Nonlinear Observability Formulation for Power Systems Incorporating Generator and Load Dynamics", to appear in the *2002 Control and Decision Conference Proceedings*.

C. Dafis, C. O. Nwankpa, "A Nonlinear Observability Formulation for Power Systems Incorporating Generator Dynamics", *IEEE International Symposium on Circuits and Systems Proceedings*, Arizona, Nevada, 2002.

C. Dafis, C. O. Nwankpa "Addressing Nonlinear Observability Issues in Power Systems", *Power System Computation Conference Proceedings*, Sevilla, Spain 2002.

C. Dafis, C. O. Nwankpa, A. Petropulu, "Harmonic Decomposition of Transient Disturbances Using the ESPRIT and LS Prony Methods", *Power System Computation Conference Proceedings*, Sevilla, Spain 2002.

S. Carullo and C.O. Nwankpa, "Experimental Studies and Modeling of an Information Embedded Power System", HICSS-36 Hawaii International Conference on System Sciences, January 2003, Big Island, Hawaii.

S. Carullo and C.O. Nwankpa, "Development of a Stochastic System Model for an Information Embedded Power System", IEEE 2002 Conference on Decision and Control, December 2002, Las Vegas, Nevada.

S. Carullo and C.O. Nwankpa, "Experimental Platform for the Modeling of an Information Embedded Power System", 14th Power System Computation Conference, June 2002, Sevilla, Spain.

S. Carullo and C.O. Nwankpa, "Analysis of Measurement Delay Errors in an Ethernet Based Communication Infrastructure for Power Systems", IEEE International Symposium on Circuits and Systems, May 2002, Scottsdale, Arizona.

M. A. Sujan, C. Nwankpa and M. Gravener, "Towards the Real Time Monitoring of AGC," *Proceedings of the 33nd Annual Hawaii International Conference on System Sciences*, 2000.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "On the Identification of the Singularity Induced Bifurcations of the Differential-Algebraic Power System Models," Proceedings of 32nd North American Power Symposium (NAPS), University of Waterloo, Waterloo, Ontario, Canada, pp. 10/28 –10/34, October 2000.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, " Singular Points of the Differential-Algebraic Power System Model," Proceedings of IEEE PES 2000 Summer Meeting, Seattle, Washington, July 2000.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Enhanced Visualization of Power System Stability Limits Imposed by Singularity Induced Bifurcations," Proceedings of IEEE International Symposium on Circuit and System (ISCAS), Geneva, Switzerland, pp. IV/229-IV/231 May 2000.

M. Gravener and C. Nwankpa, "ATC computational issues," *Proceedings of the 32nd Annual Hawaii International Conference on System Sciences*, 1999

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Evaluation of Stability Limits Imposed by Singularity Induced and Saddle Node Bifurcations", Proceedings of 1999 IEEE Conference on Decision and Control (CDC), Phoenix, Arizona, pp. 682-683 December 1999.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Bifurcation and Singularity Analysis with Voltage Stability Toolbox", Proceedings of 31st North American Power Symposium (NAPS), San Obispo, CA, pp. 390-397, October 1999.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Identification of the Functional Relationship between Singularity Induced Bifurcation Points and Load Change", Proceedings. of IEEE PES 1999 Summer Meeting, Edmonton, Alberta, Canada, pp. 1318-1323, July 1999.

D. Niebur, S. Ayasun, C. O. Nwankpa, H. G. Kwatny and R. Fischl, "Voltage Stability Modeling and Simulation Using Matlab," Proceedings of the 1998 ONR-Drexel-NSWC

Workshop on Electric Shipboard System Modeling, Simulation and Control, Philadelphia, pp. VI/3.1-VI/3.8 June 1988.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Numerical Issues in the Location of Singularity-Induced Bifurcation Points", Proc. of IEEE PES Winter Meeting, New York City, February 1999, pp. 707-712

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Singular Sets and Surfaces and Their Implications in Power Systems," Proc. the American Control Conference, San Diego, CA, June 1999, pp. 4198-4202.

S. Ayasun, C. O. Nwankpa and Harry G. Kwatny, "Identification of the Functional Relationship between Singularity Induced Bifurcation Points and Load Change", Proc. of IEEE PES Summer Meeting, Edmonton, Alberta, Canada, July 1999, pp. 1318-1323

Carullo, S. and Nwankpa, C., "Interconnected Power Systems Laboratory: Symmetrical Components Experiment," Proceedings of 1998 North American Power Symposium, Cleveland, OH., Oct. 13-15, 1998.

Tse, M., Nwankpa, Fischl, R., Rosen, A., Gilbert, D. and Richardson, R., "Progress in Optically Controlled High Voltage Switch for Power Electronic Applications" Proceedings of 1998 North American Power Symposium, Cleveland, OH., Oct. 13-15, 1998.

Sochuliakova, D., Niebur, D., Nwankpa, C., Fischl, R. and Richardson, R., "Capacitor Switching Transients", Proceedings of 1998 American Control Conference, Philadelphia, PA., June 24-26, 1998, pp. 3396-3397.

Sochuliakova, D., Niebur, D., Nwankpa, C., Fischl, R. and Richardson, R., "Prediction of Power System Distrubances", Proceedings of 1997 North American Power Symposium, Laramie, WY., Oct. 13-14, 1997, pp. 347-353

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Rost, G., Nwankpa, C., Fischl, R., Rosen, A., Gilbert, D. and Richardson, R., "A New Fault Tolerant Semiconductor Laser Triggering System for Light Triggered Thyristors", Proceedings of 1997 European Power Electronics Conference, Sept. 8-10, 1997., Vol. 4, pp. 78-81.

M. Gravener and C. Nwankpa, "Network Uncertainty and a Method of Calculating Available Transfer Capability", Proceedings of 1998 IEEE Power Engineering Summer Meeting, San Diego, CA. July 12-16, 1998.

D. Niebur, C. O. Nwankpa, R. Fischl and H. Kwatny, "A Framework for Electric Survivability of Electric Shipboard Distribution Systems," Proceedings of ELECCHIP'98, Istanbul, Turkey, Sept 1, 1998.

S. P. Carullo, C. O. Nwankpa, and R. Fischl, "Integrating a Power Systems Laboratory into a Client/Server Based Computing Environment", Proceedings of 1996 American Society for Engineering Education, Washington, D.C.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl and A. Sundaram, "Prediction of Distribution System Disturbances", Proceedings of the 1994 *IEEE Power Electronics Specialists' Conference,* Taiwan, June 20-24, 1994.

R.M. Hassan and C. O. Nwankpa, "An Interpretation of Stochastic Voltage Collapse Indication," Proceedings of *1995 IEEE Power Industry Computer Applications* (PICA) Conference, Salt Lake City, UT, May 7-12, 1995.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl, A. Rosen D. B. Gilbert and D. Richardson, "Evaluation of a PIN Diode Switch for Power Applications", Proceedings of 1995 *IEEE Power Electronics Specialists Conference,* Atlanta, Ga., pp. 68-73, June 18-22, 1995.

Y. Liang, S. G. Casper, C. O. Nwankpa, R. Fischl, A. DeVito and S. C. Readinger, "Techniques For Estimating Dynamic Load Model Parameters", Proceedings of the *27th Annual North American Power Symposium,* Bozeman, Montana, pp. 403-409, October 1-3, 1995.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl, A. Rosen D. B. Gilbert and D. Richardson, "Evaluation of a PIN Diode Switch for Power Applications", Proceedings of 1995 *IEEE Power Electronics Specialists Conference,* Atlanta, Ga., pp. 68-73, June 18-22, 1995.

L. Xu, C. O. Nwankpa and R. Fischl, "Stochastic Robustness in Dynamic Power System Analysis", Proceednge of the 26th Annual*North American Power Symposium,* Manhatten Kansas, September 26-27, 1994.

S. G. Casper, C. O. Nwankpa, R. Fischl, A. DeVito and S. C. Readinger, "On Substation Tests for Load Modeling", Proceednge of the 26th Annual *North American Power Symposium,* Manhattan, Kansas, September 26-27, 1994.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl, A. Rosen D. B. Gilbert and A. Sundaram, "A Novel Laser Activated PIN Diode Switch for Power Applications", Proceedings of the 1994 *International Conference on Electric Drives and Power Electronics,* Slovakia.

J. W. Schwartzenberg, C. O. Nwankpa, R. Fischl, A. Rosen D. B. Gilbert and A. Sundaram, "A Novel Optically Controlled Semiconductor Switch for Power Applications", Proceedings of 1994 *IEEE/PES Transmission and Distribution Conference and Exposition,* Chicago, Il., April 10-15, 1994.

M. Ginzburg and C. O. Nwankpa, "Validating the use of stochastic models for power electronic converters", 1993 *M.W. Symposium on Circuits and Systems,* August, 1993.

C. O. Nwankpa, "The search for an on-line dynamic security index," Proc.*1992 IEEE International Conference on Systems, Man, and Cybernetics*, Vol. 2, pp. 1090-1095.

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C. O. Nwankpa, "A Stochastic Model for Power Electronic Switching Converters", Proc. *1992 IEEE International Symposium on Circuits and Systems*, San Diego, CA., pp. 738-741.

R. Fischl C. O. Nwankpa, and E. MacDonald, "Electric Power Engineering Education at Drexel University", *1992 American Power Conference*, Chicago, Il., April 13-15, 1992.

C. O. Nwankpa, R. Fischl and R. M. Hassan, "Using Stochastic Models for Analyzing Power System Dynamics", Proceedings of the *1992 IEEE International Symposium on Circuits and Systems*, San Diego, CA., pp. 2557-2560.

R.M. Hassan and C. O. Nwankpa, "A Stochastic Model for Power System Transformer Tap-Changers", Proc.*1992 American Control Conference*, Chicago, Il., pp. 1732-1733.

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C. O. Nwankpa and S. M. Shahidehpour, "A probabilistic approach to bulk power transmission systems analysis," Proceedings *21st North American Power Symposium*, Oct. 1989, Rolla, Mo., pp. 88--94.

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